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**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Endangered Status and Critical Habitat Designation for the Owens Tui Chub**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Service determines endangered status and designates critical habitat for the Owens tui chub (*Gila bicolor snyderi*). This action is being taken because the Owens tui chub has declined in recent years and has been extirpated from much of its range. It historically inhabited streams, rivers, springs, and irrigation ditches in the Owens Basin, Mono and Inyo Counties, California. Viable populations are now known from only two locations in Mono County, the headwater springs of Hot Creek and approximately 8 miles of the Owens River below Long Valley Dam. Habitat destruction, predation by exotic fish species, and hybridization with a closely related chub species further threaten the Owens tui chub.

Endangered species determination and designation of critical habitat affords the Owens tui chub the full protection provided by the Endangered Species Act of 1973, as amended.

**DATE:** The effective date of this rule is September 4, 1985.

**ADDRESSES:** The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Lloyd 500 Building, 500 NE. Multnomah Street, Suite 1692, Portland, Oregon 97232.

**FOR FURTHER INFORMATION CONTACT:** Mr. Wayne S. White, Chief, Division of Endangered Species, at the above address (503/231-6131 or FTS 429-6131).

**SUPPLEMENTARY INFORMATION:**

**Background**

The Owens tui chub (*Gila bicolor snyderi*) is a moderate to large subspecies of *Gila bicolor*, with males reaching up to four inches in length and females slightly over five inches. The fish is an olive color above and whitish below, with lateral blue and gold reflections (Miller, 1973). The side of the head, particularly along the margin of the preopercle, displays a noticeable gold color. Based on past collections, the fish occupied a wide variety of habitats ranging from small springs that harbored only a few hundred individuals to the Owens River that provided habitat for tens or hundreds of thousands.

The Owens tui chub has been known to the scientific community since the late 1800's. Fish collections made around the turn of the century indicated the presence of tui chubs in the Owens River (Snyder, 1917) and Owens Lake (Gilbert, 1893). The collections of Carl Hubbs made during the 1930's (reported by Miller, 1973), provided the first major survey of aquatic habitats in the Owens Basin. Owens tui chubs were collected by Hubbs and co-workers in the following areas: irrigation canals south of Bishop, Owens River, headsprings of Fish Slough, drainage ditches south of Big Pine, North Fork of Bishop Creek, Bishop Creek, Hot Creek, headwater springs of Hot Creek, Whiskey Creek, Owens Lake, ponds at Lone Pine, Morton's Slough, and various ditches emanating from the Owens River. By the time the Owens tui chub was described in 1973 as a new subspecies endemic to the Owens Basin of Inyo and Mono Counties, California (Miller, 1973), the status of the fish was deteriorating rapidly.

Habitat alteration, predation and competition by exotic fishes, and hybridization with introduced Lahontan tui chubs (*Gila bicolor obesa*) have

eliminated genetically pure Owens tui chubs from all but two localities. Owens tui chubs are now known only from approximately 8 miles of the Owens River below Long Valley Dam and from two adjacent headwater spring areas of Hot Creek. The population in the Owens River is greatly reduced in numbers, largely because of predation by brown trout (*Salmo trutta*). The population in the headwater springs of Hot Creek is small and is also threatened by the presence of exotic fishes. These habitats represent less than one percent of the original range of the Owens tui chub.

Both sites are within the Inyo National Forest boundary, but owned by the City of Los Angeles. A fish hatchery located at Hot Creek is managed by the State on a portion of the city owned land. The Owens tui chub has been reintroduced into Fish Slough, Mono County, but the success of this recovery effort is doubtful as no specimens have subsequently been secured from the slough. The California Department of Fish and Game (CDFG), Bureau of Land Management (BLM), and U.S. Fish and Wildlife Service (Service) plan to continue attempts at reintroducing the Owens tui chub at this historical site. Tui chubs of uncertain taxonomic identity have been recorded from Silver Lake (not historical habitat) in the Inyo National Forest. Specimens are being analyzed by R. R. Miller at the Museum of Zoology, University of Michigan to determine if they are *Gila bicolor snyderi*.

The status of the Owens tui chub, the most precarious of any fish in the Death Valley region (Pister, 1980), prompted the State of California to classify this fish as "endangered" (CDFG, 1980). The Owens tui chub was included in the Service's December 30, 1982, Review of Vertebrate Wildlife for Listing as Endangered or Threatened Species (47 FR 58454). In this review, the Owens tui chub was placed in category 1, indicating that the Service had substantial information on hand to support a proposed rule to list the fish as endangered or threatened. On April 12, 1983, the Service was petitioned by the Desert Fishes Council to list the Owens tui chub. After evaluation of this petition, the Service found that the petitioned action was warranted. A notice of this finding was published in the *Federal Register* on June 14, 1983 (48 FR 27273). In response to information in the Service's files and the petition, a rule proposing endangered status and critical habitat for the Owens tui chub was published on March 23, 1984 (49 FR 10959).

**Summary of Comments and Recommendations**

In the March 23, 1984, proposed rule (49 FR 10959) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices, inviting general public comment, were published in the *Los Angeles Times*, *Desert Dispatch* and *Inyo Register* on April 29, April 20, and April 20, 1984, respectively. Eleven comments were received and are discussed below.

Of the 11 comments received, 3 were non-substantive and 8 commented on the proposed rule or gave additional information. Statements of support were received from the Mono County, California, International Union for Conservation of Nature and Natural Resources, Defenders of Wildlife, California Department of Fish and Game, Desert Fishes Council, and chairman of the Wildlife and Fisheries Biology Department at the University of California, Davis. In addition to indicating support for the proposal, the Department of Fish and Game recommended expansion of the proposed critical habitat for the Hot Creek population to include all the groundwater aquifer that feeds the springs. Concern was expressed that the area might be subject to geothermal energy development in the future and that such development might adversely affect the aquatic habitat required for the fish. The Service believes that protection of the critical habitat as proposed on March 23, 1984, is sufficient for the conservation of the tui chub. Section 7 of the Endangered Species Act of 1973, as amended, requires Federal agencies to consult with the Service on any action that may destroy or adversely modify critical habitat. Therefore, the critical habitat of a species would receive protection from actions that could affect such habitat whether or not those actions occurred within the designated critical habitat.

In addition to the above supporting comments, a comment was received from the Department of Water and Power, City of Los Angeles, supporting the listing but questioning whether the habitat of the fish needed specific protection due to the fact that the two known populations are on lands in public ownership. While the Service agrees that public ownership of

important habitat areas typically results in protection of those areas, formal designation of critical habitat provides a description of those locations where the species is found and thereby may aid in the development of management plans. Furthermore, Section 4(a)(3) of the Endangered Species Act requires the Secretary to determine critical habitat to the maximum extent prudent and determinable concurrently with a determination of endangered or threatened status for a species. Protection afforded by critical habitat designation applies only to Federal agencies actions.

The final substantive comment was received from the Forest Supervisor of the Inyo National Forest. No opinion regarding the proposed rule was expressed, but information was provided about the possible occurrence of the Owens tui chub in Silver Lake. Specimens taken from this area, which is outside the fishes historical range, are being studied.

#### Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Owens tui chub (*Gila bicolor snyderi*) should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (to be codified at 50 CFR Part 424; see 49 FR 38900, October 1, 1984) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Owens tui chub (*Gila bicolor snyderi*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Ichthyological surveys conducted during the 1930's and 1940's found Owens tui chubs common in a wide range of aquatic habitats in the Owens Basin. Since that time, most suitable habitats have been modified, streams have been diverted, and rivers have been impounded. Presently, viable populations are known in only two locations, representing less than one percent of the fish's historical range. Demand for water resources of the Owens Basin is high. Water is extensively used for local agricultural and municipal purposes. The single largest consumer of Owens Basin water is the City of Los Angeles. Through a system of diversion structures and aqueducts, the city conducts water to the Los Angeles Basin. Adverse

modifications of aquatic habitats to meet the various demands for water have reduced available suitable habitat for the Owens tui chub.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* There is no evidence to suggest that the Owens tui chub has declined as a result of overutilization.

C. *Disease or predation.* Introduction of exotic fishes, resulting in predation and competition, is the major threat facing the remaining populations of the Owens tui chub. Pister (1981) reported that 18 exotic fishes have been introduced into the Owens River, a river that historically supported four native fishes. Predation by brown trout (*Salmo trutta*) is responsible for reduced numbers of Owens tui chub in the Owens River.

D. *The inadequacy of existing regulatory mechanisms.* The State of California has listed the Owens tui chub as "endangered" and has a provision in its endangered species law to protect this species from taking. However, the State has no authority to protect habitat for the Owens tui chub, nor does it provide for Federal assistance with recovery actions.

E. *Other natural or manmade factors affecting its continued existence.* Lahontan tui chubs (*Gila bicolor obesa*) have been introduced as bait fish into many waters of the Owens Basin. Subsequently, they have hybridized extensively with the native and closely related Owens tui chub. Hybridization was first recognized as a problem in 1973 at Crowley Lake, where fishermen appear to have illegally introduced the Lahontan tui chub while fishing (Miller, 1973). Since that time, hybridization with the Lahontan tui chub has been demonstrated to be a major problem throughout the range of the Owens tui chub. Genetically pure Owens tui chubs are now restricted to two known localities.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list the Owens tui chub (*Gila bicolor snyderi*) as endangered. Due to the contraction of the species' range to less than one percent of its historical size and the threats present at the two localities where it is now found, endangered status is being determined. The designation of critical habitat is discussed below.

#### Critical Habitat

Critical habitat, as defined by Section 3 of the Act, means: (i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is being designated for the Owens tui chub to include the following two areas of Mono County, California: (1) Owens River and 50 feet on each side of the river from Long Valley Dam downstream for a distance of 8 stream miles; and (2) A portion of Hot Creek and outflows, and those areas of land within 50 feet of all sides of the springs, their outflows, and the portion of Hot Creek. This area includes about 0.25 miles of stream and springs, and about 5 acres of fronting land. Known constituent elements include high quality, cool water with adequate cover in the form of rocks, undercut banks, or aquatic vegetation, and a sufficient insect food base.

The areas proposed as critical habitat for the Owens tui chub satisfy all known criteria for the ecological, behavioral, and physiological requirements of the species. This fish successfully reproduces in the headwater springs of Hot Creek, where the population is apparently viable, although reduced in size from predation by exotic fishes. The population in the Owens River has decreased since the introduction of exotic fishes; however it continues to be a small but viable population. Both areas would provide excellent habitat for the Owens tui chub if exotic fishes were eliminated or greatly reduced. Lands adjacent to the streams and springs are included for the protection of the riparian habitat that is important to the maintenance of aquatic ecosystems. The areas designated as critical habitat include the entire range of the subspecies as known at this time.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those

activities (public or private) which may adversely modify such habitat or may be affected by such designation. Activities that may adversely modify the critical habitat for the Owens tui chub are identified as follows: (1) Introduction of exotic aquatic organisms; (2) Activities that decrease available water or cause a significant change in the physical or chemical properties (e.g., temperature, pH or dissolved gases) of the water; (3) Removal of natural riparian and/or submergent vegetation, except what might be required to maintain an open-water habitat for the Owens tui chub; (4) Pollution of aquatic habitats or adjacent terrestrial habitats; (5) channelization or diversion of water flows; and (6) Overgrazing of adjacent riparian areas.

The City of Los Angeles owns the entire proposed critical habitat. Activities within the critical habitat include sportfishing along the Owens River and operation of a trout hatchery by the State of California in the Hot Creek area. These activities do not involve Federal funds or permits and are not expected to affect or be affected by the critical habitat designation. The land surrounding the critical habitat is located within the Inyo National Forest. The adjacent land is administered by the Forest Service under the Mammoth-Mono Unit Plan (M-MUP). Forest Service management of the surrounding areas under the M-MUP is apparently compatible with the critical habitat designation. This critical habitat area around Hot Creek is part of a Known Geothermal Resource Area (KGRA). The Bureau of Land Management (BLM) has issued some geothermal leases in the area. These leases have stipulations that provide for protection of resources. No Plans of Operations have been submitted to BLM for exploration or development and no active exploration has occurred. BLM management of geothermal leasing is apparently compatible with the critical habitat designation. There is also a small privately-operated geothermal heating plant located on a privately-owned inholding of the Inyo National Forest in the vicinity of the critical habitat. No Federal funds or permits are involved in the operation of the heating plant, and its operation is not expected to affect or be affected by the critical habitat designation.

No activities are presently known that may affect or be affected by the designation of critical habitat. However, any Federal agency that believes its actions may affect the Owens tui chub, or may adversely modify its critical

habitat is required to enter into consultation with the Service.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. To obtain this information, the Service contacted Federal and State agencies and other interested parties that might have activities involving Federal funds or permits within the area affected by the critical habitat designation. The Service has evaluated the critical habitat designation after considering all available information and concludes that no adjustments to the area proposed as critical habitat are warranted.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. There are no known ongoing Federal activities that will be affected by this proposal. If active geothermal development should occur in the future on Forest Service lands in the vicinity of the critical habitat, consultation with the Service will be necessary to ensure the protection of the Owens tui chub and its critical habitat.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

#### Regulatory Flexibility Act and Executive Order 12291

The Department of the Interior has determined that designation of critical habitat for this species will not constitute a major action under Executive Order 12291 and certifies that this designation will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). The critical habitat designation as defined in the proposed rule did not bring forth economic or other impacts to warrant consideration of revising the critical habitat designation due to such impacts. The critical habitat is located at two sites in Mono County, California. The lands are within the Inyo National Forest boundary on lands owned by the City of

Los Angeles and used as a watershed. The City of Los Angeles has informed the Service that protection of this watershed is of concern and no future developments that would adversely affect the critical habitat are anticipated. The State of California has informed the Service that management of the small fish hatchery on Hot Creek is compatible with the designation of critical habitat. No significant economic or other impacts are expected as a result of the critical habitat designation. This conclusion is based on current BLM and Forest Service management of the KGRA area surrounding the critical habitat, no anticipated impact from the privately-owned geothermal heating plant, no known involvement of Federal funds or permits for the city-owned land included in the critical habitat, and the unquantifiable benefits that may result from the critical habitat designation for the Owens tui chub. No direct costs, enforcement costs, or information collection or recordkeeping requirements are imposed on small entities by this designation. These determinations are based on a Determination of Effects that is available at the Services Regional

Division of Endangered Species (See "Addresses" section, above).

#### Literature Cited

- California Department of Fish and Game. 1980. At the crossroads 1980, a report on California's endangered and rare fish and wildlife. 147 pp.
- Gilbert, C.H. 1893. Report on the fishes of the Death Valley expedition collected in southern California and Nevada in 1891, with description of new species. No. Amer. Fauna No. 7.
- Miller, R.R. 1973. Two new fishes, *Gila bicolor snyderi* and *Catostomus fumeiventris*, from the Owens River Basin, California. Occ. Pap. Mus. Zool. Univ. Michigan 667:1-19.
- Pister, E.P. 1980. Death Valley system committee report. Proc. Desert Fishes Council 12:8-13.
- Pister, E.P. 1981. The conservation of desert fishes. Pp. 411-445 in, Fishes in North American Deserts. R.J. Naiman and D.L. Soltz (eds.). John Wiley and Sons, New York.
- Snyder, J.O. 1917. An account of some fishes from Owens River, California. Proc. U.S. Nat. Mus. 54:201-205.

#### Author

The primary author of this final rule is Dr. Jack E. Williams, U.S. Fish and Wildlife Service, 2800 Cottage Way,

Room E-1823, Sacramento, California 95825 (916/484-4935 or FTS 468-4935).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### Regulations Promulgation

#### PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.11(h) by adding the following, in alphabetical order under "FISHES", to the List of Endangered and Threatened Wildlife:

#### § 17.11 Endangered and threatened wildlife.

\* \* \* \* \*

(h) \* \* \*

Species			Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name	Historic range					
FISHES							
Chub, Owens tui	<i>Gila bicolor snyderi</i>	U.S.A. (CA)	Entire	E	192	17.95(e)	NA

3. Amend Section 17.95(e) by adding critical habitat of the Owens tui chub, as follows: The position of this entry under § 17.19(e) will follow the same sequence as the species occurs in § 17.11.

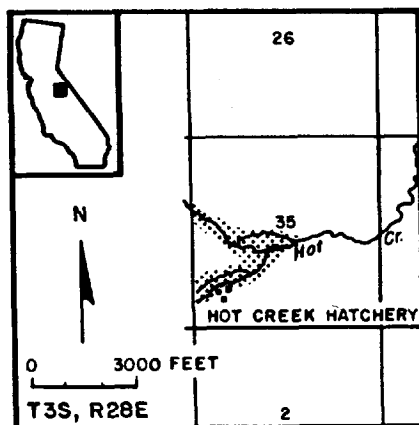
#### § 17.95 Critical habitat—fish and wildlife.

(e) \* \* \*

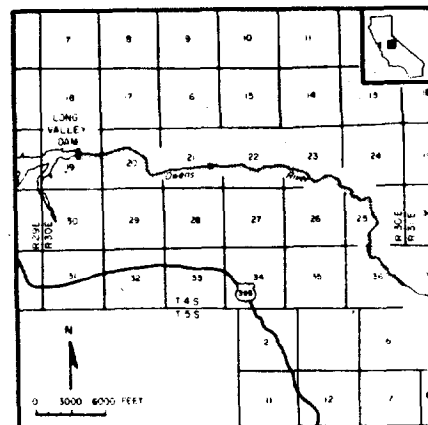
Owens tui chub (*Gila bicolor snyderi*)

#### California, Mono County.

1. Hot Creek, adjacent springs and their outflows in the vicinity of Hot Creek Hatchery, and 50 feet of riparian habitat on all sides of the creek and springs in T3S, R28E, SW¼ Section 35.



2. Owens River, and 50 feet on both sides of the river, from Long Valley Dam downstream for 8 stream miles in T4S, R30E, Sections 19, 20, 21, 22, 23, 24, 25, and 36.



Known constituent elements include high quality, cool water with adequate cover in the form of rocks, undercut banks, or aquatic vegetation and a sufficient insect food base.

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Dated: July 5, 1985.

**Susan E. Recce,**

*Acting Assistant Secretary for Fish and  
Wildlife and Parks.*

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**BILLING CODE 4310-55-M**

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